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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

FLATWORLD INTERACTIVES LLC, a Pennsylvania limited liability company,

Plaintiff,

v.

APPLE INC., a California corporation,

Defendant.

No. C 12-01956 WHO

FLATWORLD'S AMENDED OPENING CLAIM CONSTRUCTION BRIEF

JURY TRIAL REQUESTED

Date: **September 9, 2013**
Time: **1:30 PM**
Courtroom: **2, 17th Floor**
Judge: **Honorable William H. Orrick**

DATE ACTION FILED: April 19, 2012

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

CASES

I. INTRODUCTION

Plaintiff FlatWorld Interactives LLC proposes, together with Apple, nine claim terms for construction. FlatWorld's constructions are straightforward and rely on the intrinsic record, primarily the language of the claims, themselves, the specification, and the prosecution history. FlatWorld has presented some dictionary definitions as extrinsic evidence, but these merely confirm that the constructions FlatWorld proffers based on the intrinsic record are consistent with the common and ordinary meaning of the claim terms.

FlatWorld defines "image" as "[a] displayed or drawn representation on the screen, capable of being manipulated as a unit by dragging and removal." This definition has three attributes: (1) it is a representation on the screen or display of a system; (2) it can be manipulated by the user; and (3) when dragged and thrown, it is treated as a unit. All three attributes derive directly from the specification. Apple seeks to substitute the word "object" from the specification for the term "image" in the claims, but "object" is used in the specification only in its common and ordinary meaning of something that is perceptible, consistent with FlatWorld's construction of "image" as a representation displayed on the system's screen or display.

FlatWorld defines "threshold velocity" as "[a] velocity that, if exceeded, is a necessary condition to change the semantics of a dragging gesture." This definition is supported by the open-ended "comprising" language in the preamble of the claim, the specification and the prosecution history. Apple seeks to introduce a requirement that threshold velocity must be the sole condition—a *sufficient condition*—that changes the semantic of a dragging gesture to a swipe or throw. This construction is inconsistent with the open-ended nature of the asserted claims, and finds no support in the specification, prosecution history, or even extrinsic evidence.

FlatWorld defines a "representative" of an image as "[a] depiction of at least a portion of the removed image." This is consistent with the common and ordinary meaning of "representative" and its use in the claims to refer to an image, as well as its use in the prosecution history to distinguish a prior art reader reference that displayed images of printed text as pages, with the previously turned pages depicted as page edges. Apple attempts to graft the concept of an image being a "symbol" onto its use as a representative image in the claims and prosecution

history, based entirely on extrinsic evidence: a dictionary definition. There is no discussion of "symbols" as "representatives" of removed images anywhere in the specification or prosecution history.

FlatWorld defines "dragging" an image to mean that it "is or was caused to move with the touched point, or to track location inputs." This construction closely matches the use of "drag" in the different contexts of the claims, some of which specify a touch screen as an input device, and others that are not limited to touch screen input devices such that they also read on a conventional display with a mouse input device. It derives squarely from the specification. Apple's proposed construction would improperly introduce a touch limitation into all of the claims that are not so limited.

FlatWorld defines "manipulating" and "manipulated" using a quote from the abstract of the patent-in-suit, which provides a non-exclusive set of operations any one of which is an example of a manipulation. Apple chooses four operations ("selecting, moving, removing, and modifying"), and inserts a requirement that "at least" those four must be implemented to constitute "manipulating." There is no support in the specification or prosecution history for this made-up definition of "manipulating"/"manipulated," no support in the extrinsic evidence, and this usage is contrary to the common and ordinary meaning of the term.

FlatWorld's construction of "continually moved" and "continuing touch" (a touch that permits the image to be dragged) again derives squarely from the specification. Apple's construction requires a definition that a user's touch on the screen must remain in existence "without interruption," a nonsensical construction that requires a perpetual touch.

Finally, FlatWorld's construction of "when" in the context of the claims is in the conditional sense of the term. In other words, the image is removed "in view of the fact that" certain factors are present, *e.g.*, movement of the image exceeds threshold velocity. Apple's construction is another attempt to make threshold velocity a *sufficient condition* for removal of an image, which is inconsistent with its use in the claims, the specification and the prosecution history, and indeed, would exclude the preferred embodiment.

Apple's proposed claim constructions seek alternately to expand or contract the scope of the claims to serve some invalidity or non-infringement argument that it hopes to make. But the artificiality of these constructions is betrayed by their lack of support in the intrinsic record—the claims, specification, and prosecution history—that provides notice to the public of the scope of FlatWorld's claims, and is the primary if not exclusive source to construe the claims as they would be understood by persons having ordinary skill in the art at the time of the invention.

II. BACKGROUND OF THE TECHNOLOGY AND THE PARTIES

Dr. Slavoljub Milekic, Professor of Cognitive Science at the University of the Arts in Philadelphia, is the inventor of the subject matter of United States Patent No. RE 43,318 ("the '318 patent"). Ex. 1.[1] He has a diverse background. Dr. Milekic holds a medical degree in General Medicine, a Ph.D. in Experimental Psychology, and a MS in Neuropsychology. In addition, he is an artist and a self-taught computer programmer, who has been engaged in digital systems since personal computers first became available to the public. These diverse elements coalesced to enable him to conceive the claimed inventions in 1997.

While Dr. Milekic was teaching in the Cognitive Science Department of Hampshire College, he began experimenting with the use of touch screens in testing the cognitive development of children to study their cognitive mapping abilities. Cognitive mapping is the ability to look at an image, such as a photograph of a room filled with objects, and map from the picture to the real objects in the real room. Children do not have this ability below a certain age. Dr. Milekic developed a testing tool with a touch screen and a computer programmed to allow children to directly move images of objects within a picture of a room on the screen. To his surprise, combining the physical activity of directly moving an image of an object allowed children to map from the image to the real object at a much younger age than prior research had predicted.

Dr. Milekic realized that this novel way of interfacing with computers, by directly manipulating images on a touchscreen, opened a new range of possibilities. He began looking for other ways to implement it. In so doing, he noticed a call for proposals for a conference called

[1] All Exhibits cited are attached to the Declaration of Ryan Meyer, filed concurrently with this brief.

"*Museums and the Web*," dealing with art and the digital medium. Dr. Milekic wrote a paper outlining how to make digital information more accessible to children, which described his use of a touchscreen graphical user interface ("GUI") to enable direct manipulation of displayed images. He presented the paper at the conference in March, 1997. This presentation attracted considerable interest from museum professionals, some of whom subsequently contacted him and asked him to design such a system for their use. As a result, Dr. Milekic's invention has been exhibited at the Speed Art Museum, the Phoenix Art Museum, and the Philadelphia Zoo.

In 1997, Dr. Milekic applied for a patent, which issued as US Patent No. 6,920,619, and later became the reissue RE 43,318 patent-in-suit (the "'318 Patent). It claims priority to a provisional application he filed on August 28, 1997. The '318 patent is drawn to a computer system that distinguishes between when a user wishes to "drag" an image across the screen to a different position, and when the user wishes to "throw" the image entirely off of the screen. The system uses a threshold velocity and other factors in making this distinction. If the user moves an image below a threshold velocity, the image is dragged across the screen. But if the movement exceeds a threshold velocity, the computer removes the image from the screen. Thus, the manipulated image behaves like a similarly manipulated object in the real world. For example, I can move my hand at a moderate pace to move my pen from one position on my desk to another, or I can flick my hand quickly and throw my pen off of my desk. This continuity between the real and virtual world decreases the cognitive load of the user interface—in other words, making the user interface easier and more intuitive for any user.

Since 1997, Dr. Milekic's invention has become so common in digital devices that it is an ubiquitous means of interacting with them. Apple's accused products are the Apple iPhone, iPod, iPad, Nano, and various desktop and laptop computers. Beginning in 2007, *ten years* after Dr. Milekic filed his provisional application and with full notice of Dr. Milekic's patent, Apple began incorporating his claimed invention into its digital devices. Dr. Milekic's claimed "throw" gesture is one of the handful of gestures—scroll, drag, pinch-to-zoom, and double-tap—uniformly recognized by smart phones, tablets, and other digital systems across multiple platforms, and one of the fundamental ways that users interact with them.

III. LEGAL RULES FOR CLAIM CONSTRUCTION

There are three primary sources in claim construction: the express terms of the claims, the specification or written description, and the prosecution history or file wrapper, which together form the intrinsic evidence. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)(*en banc*), *aff'd*, 517 U.S. 370 (1996). "In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996), *citing Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1216 (Fed. Cir. 1995).

In construing claims, the Court must look first to the language of the claims themselves. *Middleton, Inc. v. Minn. Mining & Mfg. Co.*, 311 F.3d 1384, 1387 (Fed. Cir. 2002). To that end, "the words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005).[2] The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation. *Id.* More specifically, "the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, as of the effective date of the patent application." *Id.* at 1313. Courts examine "those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean." *Id.* This includes the "intrinsic" evidence. *See Vitronics Corp.*, 90 F.3d at 1582.

The context in which a term is used in a claim can by highly instructive. *See Phillips*, 415 F.3d at 1314 (explaining that the term "steel baffles" in a claim "strongly implies" that "baffles" are not inherently made of steel). Other claims of the patent-in-suit can also shed light as to the meaning of a term. *Id.*, *see also Arlington Indus. V. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1254 (Fed. Cir. 2011). Also, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim. *Phillips*, 415 F.3d at 1314; *see also Voda v. Cordis Corp.*, 536 F.3d 1311, 1320 (Fed. Cir.

[2] All emphasis in the quotations herein has been added and internal citations and quotations omitted unless otherwise indicated.

2008)(independent claim did not require a portion of the claimed catheter to be straight where dependent claim recited that the portion is straight).

The specification is "'always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* at 1315; *accord Kim v. ConAgra Foods, Inc.*, 465 F.3d 1312, 1318 (Fed. Cir. 2006). *Phillips* invited courts "to rely heavily on the written description [in the specification] for guidance as to the meaning of the claims." *Phillips*, 415 F.3d at 1317. A patentee's choice of embodiments may shed light on the intended scope of the claim. *Cybor Corp. v. FAS Tech. Inc.*, 138 F.3d 1448, 1471 (Fed. Cir. 1998). Although the specification often describes specific embodiments of the invention, the claims are not confined to those embodiments. *Id.*, *Phillips*, 415 F.3d at 1323; *see also Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009)("The claims, not specification embodiments, define the scope of patent protection."). On the other hand, a construction that excludes a preferred embodiment is rarely, if ever, correct. *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 865 (Fed Cir. 2004).

The "[p]rosecution history is an important source of intrinsic evidence in interpreting claims because it is a contemporaneous exchange between the applicant and the examiner." *Desper Prods. v. QSound Labs., Inc.*, 157 F.3d 1325, 1336-37 (Fed. Cir. 1998). The prosecution history "consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent." *Phillips*, 415 F.3d at 1317. "[L]ike the specification, the prosecution history was created by the patentee in attempting to explain and obtain the patent." *Id.* Although a patent applicant may narrow the ordinary meaning of a claim by excluding specific interpretations that were disclaimed during prosecution, the test is stringent. *See Aventis Pharma S.A. v. Hospira, Inc.*, 675 F.3d 1324, 1330 (Fed. Cir. 2012). A disclaimer of claim scope "'must be clear and unambiguous.' Consequently, for prosecution disclaimer to attach, the disclaimer "must be clear and unambiguous." *Seachange Int'l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1373 (Fed. Cir. 2005). Federal Circuit precedent "requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325-26 (Fed. Cir. 2003). Moreover, the disavowal must directly address the

disputed term. *See Schwing GmbH v. Putzmeister Aktiengesellschaft*, 305 F.3d 1318, 1324 (Fed. Cir. 2002). "If the locus of the argument does not center on the disputed term, a court will face an ambiguity as to whether the statement or disclaimer affects the inventor's belief in the scope of the disputed term." *Sky Techs., LLC v. Ariba, Inc.*, 491 F. Supp. 2d 154, 158 (D. Mass. 2007). "There is no 'clear and unmistakable' disclaimer if a prosecution argument is subject to more than one reasonable interpretation, one of which is consistent with a proffered meaning of the disputed term." *Sandisk Corp. v. Ritek Corp.*, 415 F.3d 1278, 1287 (Fed. Cir. 2005); *see also Northern Telecom Ltd. V. Samsung Elecs. Co.*, 215 F.3d 1281, 1294 (Fed. Cir. 2000) (declining to apply prosecution disclaimer where the alleged disavowal of claim scope is ambiguous).

All other evidence of the meaning of a claim, such as dictionaries, learned treatises, expert testimony, and the testimony of the inventor, is extrinsic evidence. *Markman*, 52 F.3d at 980. Extrinsic "evidence may be helpful to explain scientific principles, the meaning of technical terms, and terms of art that appear in the patent and prosecution history" and "may demonstrate the state of the prior art at the time of the invention." *Id.* Extrinsic evidence is "all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317. Such evidence is separate from the patent, prepared for litigation purposes, and not necessarily reflective of the perspective of a person of ordinary skill. *Id.* at 1318. Thus, "dictionary definitions may establish a claim term's ordinary meaning" (*id.*), and "[a] dictionary definition may be relied upon 'so long as [it] does not contradict any definition found in or ascertained by a reading of the patent documents.'" *Wavetronix v. EIS Elec. Integrated Sys.*, 573 F.3d 1343, 1355 (Fed. Cir. 2009) *quoting Vitronics*, 90 F.3d at 1584 n.6. But a court must not use extrinsic evidence "to vary, contradict, expand, or limit the claim language from how it is defined, even implicitly, in the specification or [file] history." *Dow Chem. Co. v. Sumitomo Chem. Co., Ltd.*, 257 F.3d 1364, 1373 (Fed. Cir. 2001).

Use of extrinsic evidence is disfavored. *See Vitronics*, 90 F.3d at 1584 (holding that if "an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term . . . it is improper to rely on extrinsic evidence."); *see also Boss Control, Inc. v. Bombardier Inc.*, 410 F.3d 1372, 1377 (Fed. Cir. 2005) ("In most situations, an analysis of the intrinsic evidence alone will

resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence."); *Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 707 (Fed. Cir. 1998) ("Because the intrinsic evidence unambiguously defined the disputed claim limitation, the district court's reliance on the expert testimony … to contradict the intrinsic evidence when interpreting the claims was error."). The court may rely on extrinsic evidence "[o]nly if a disputed claim term remains ambiguous after analysis of the intrinsic evidence." *Pickholtz v. Rainbow Techs., Inc.*, 284 F.3d 1365, 1372-73 (Fed. Cir. 2002).

IV. DISPUTED CLAIM TERMS

A. "image"

The term "image" is recited in all of the asserted claims.

FLAT WORLD'S CONSTRUCTION	APPLE'S CONSTRUCTION
A displayed or drawn representation on the screen, capable of being manipulated as a unit by dragging and removal.	The object that is manipulated in response to touch or location inputs.

An "image," as used in the '318 patent, has three attributes: (1) it is a representation on the screen or display of a system; (2) it can be manipulated by the user; and (3) when dragged and when thrown, it is treated as a unit.

The specification states that an image is something that is displayed on a touch-sensitive screen. *See, e.g.*, Ex. 1 at 2:8-10. The graphical user interface Dr. Milekic invented "is based on manipulating an image on the touch sensitive screen by touching the image directly." *Id.* 2:18-20. An image that has been selected for moving by touching it on the screen may be moved by moving the touched point within the image, "caus[ing] the image to move with the touched point, thus permitting the image to be dragged." *Id.* 2:23-24. And "[i]f the image is dragged at a speed above a threshold velocity, the image is 'thrown away from' the display and may be automatically replaced by another image. *Id.* at 2:29-32. Thus, for the invention to work as described, the image must be a representation of something that is *displayed on the screen*.

The specification states that the "image" may be manipulated by the user by being dragged, moved, and removed. *See, e.g.*, Ex. 1 at Abstract, 2:20-32, 8:6-18. The image "should be made

manipulable in the way which makes sense to the child and provides feedback which can compensate for the unavoidable impoverishment of sensory input in comparison to equivalent real-world manipulations." *Id.* at 4:33-36. "Pointing to and touching an item are the most natural ways of indicating its selection, and require no training even in very young children." *Id.* 5:60-63. "[S]elected objects can be dragged by moving the finger across the screen, and 'dropped' by lifting the finger." *Id.* at 6:40-43. Throwing is executed when the speed at which an image is dragged across a screen "exceeds a threshold speed that corresponds more or less to the speed of the natural throwing motion." *Id*. at 6:56-59. Thus, the image must be capable of being *dragged and thrown*.

A preferred embodiment, described in the specification in source code, indicates that the image is moved on the screen, and later removed from the screen, as a unit when the system detects a velocity that exceeds a threshold:

> **on MoveMe**
> ...
> put the short name of the target into CurrPict
> put the loc of the target into OrigPosition
> ...
> repeat forever
> put mouseLoc() into OldPosition
> *set the loc of the target to MouseLoc()*
> wait 2 ticks
> put mouseLoc() into CurrPosition
> if the mouse is up then exit repeat
> end repeat
> ...
> if (item 1 of OldPosition - item 1 of CurrPosition) > 2 then
> throwLeft
> GetNewPart
> ...
> end MoveMe
>
> **on throwLeft**
> ...
> put item 2 of CurrPosition into ypos
> *move the target to -100,ypos*
> end throwLeft

Ex. 1 , Fig. 12-13, Fig., 15 (emphasis supplied).[3] The underscored lines above demonstrate that the image (the "target") is moved in its entirety with the location of the touch, and that the entire

[3] *See also, e.g.* Ex. 1 at 11:36-50 ("In broad terms, on MoveMe 1215 performs the interactions that occur when the user selects a component of the face by touching it, moves the component by dragging it, obtains a new component by throwing the component ... OrigPosition contains the

image is moved off of the screen ("move the target to -100,ypos") when thrown.[4] In the preferred embodiment, the image cannot be partially removed from the screen—as may be done with inertial scrolling, for example – but rather must be treated as a unit with respect to dragging and removal. Thus, the iimage must be dragged and thrown *as a unit*.

The usage of the term "image" in the specification is consistent with the common and ordinary meaning of the term "image" as defined in technical and English dictionaries. In *The Authoritative Dictionary of IEEE Standards Terms*, an image is "[a] displayed or drawn representation." Ex. 2 at 532. This definition is consistent with other technical dictionaries that define an image as a "picture." *See, e.g.*, Ex. 3 at 454 and Ex. 4 at 215.

The parties agree that the term "image" refers to *something* "that is manipulated" (as FlatWorld puts it, by dragging and removal). To that extent, the parties' proposed constructions are consistent. But Apple wrongly defines "image" as an "object." This merely substitutes one undefined term for another. The word "object" is ambiguous in the context of a software patent. Its common and ordinary meaning is "[s]omething perceptible, esp. to the sense of vision or touch." *The American Heritage Dictionary*, at 857 (2d College Ed.). But "object" has another narrow definition in object-oriented programming as something *im*perceptible: "a self-contained module of data and its associated processing." *Computer Desktop Encyclopedia,* p. 685 (9th Ed. 2001) (Ex. 3).[5] Apple does not disclose which usage it means, thereby preserving a latent claim construction issue for the Court to solve another day.

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value of the position of the graphical component when the moveMe event occurs; CurrPosition is the current position at which screen 111 is being touched; and CurrPict is the component of the face which is presently selected for movement."), and 11:61-12:8 ("Continuing With FIG 13 portion 1301 of MoveMe implements dragging the component; portions 1311 and 1317 implement throwing; portion 1319 does resizing. Considering portion 1301 in more detail, portion 1301 is a loop which executed from the time the user touches the component the time the user ceases to touch the component. The steps of loop 1301 are the following: The current location of the touch is saved in a local variable OldPosition; the target is moved to the current location of the touch; there is a wait of two clock ticks; the current touch position is placed in the global variable CurrPosition; if the user is no longer touching screen 1111 the loop is exited otherwise it is repeated")

[4] *See also, e.g.*, Ex. 1 at 12:30-34: "The code for throwleft on throwLeft 1501 simply moves the currently selected component indicated by the target to a position which is off screen 111 to the left thereby removing the currently selected component from the display."

[5] o**bject (1)(B)** A program constant or variable. IEEE 100, *The authoritative Dictionary of IEEE Standards Terms*, p. 752 (7th Edition, 2000) (Ex. 2); **object (2)** In object-oriented

Apple creates this ambiguity because it wants to argue that an "image" may include digital content that is not displayed on the system's screen, in other words, that the "object" is the data associated with a representation that transcends the borders of the screen and is not immediately perceptible to the user. But there is no instance in the intrinsic record in which the word "image" is used as "a self-contained module of data and its associated processing," or any variation thereof. Admittedly, the specification uses "object" to refer to something seen on the display of the preferred embodiment ("[s]election of an object such as a circle **115** in display **111**[of the device in Figure 1] is carried out by touching it." ('318 patent at 6:28-29)), but this use is the common and ordinary meaning as a *perceptible* something: a depiction of something that is displayed to the user on a screen.

B. "threshold velocity"

C. "velocity…exceeds a…**threshold"**

The term "threshold velocity" appears in claims 1, 2, 5, 6, 7, 8, 18, 19, and the term "velocity . . . exceeds a . . . threshold" appears in claims 15 and 20.

FLAT WORLD'S CONSTRUCTION	APPLE'S CONSTRUCTION
Velocity: the speed of at least one directional component of motion. **Threshold velocity**: A velocity that, if exceeded, is a necessary condition to change the semantics of a dragging gesture.	**Velocity**: velocity or, in the alternative, speed **Threshold velocity**: A level or value of velocity sufficient to cause the dragged/moved image to be removed from the display

The concept of "threshold velocity" or "velocity…exceeds a…threshold" relates to two separate states of the invention. Below a threshold velocity, dragging an image performs one operation – moving the image; above the threshold velocity, dragging performs a different operation – removing the image from the display. The meaning and effect of the threshold velocity are most clearly set out in the file history. "This is a species of a generic invention in which there are two drag operations, a move drag operation and a remove drag operation." Ex. 7 at

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programming, a variable comprising both routines and data that is treated as a discrete entity. *Microsoft Computer Dictionary*, p. 317 (4th Edition, 1999) (Ex. 5).

FWAPP863. For example, the file history states that "[t]he independent claims of the patent claim an operation which removes an object from the display when the object is dragged at a velocity which is above a threshold velocity." *Id.* Accordingly, the effect of meeting the threshold velocity is not simply a change in degree; it is actually a change in operation.

"[V]elocity" is "the speed of something in a given direction" according to Apple's own Dictionary (Ex. 9). It is not limited to any particular direction by the claims, specification, or file history, and may have more than one component (*e.g.*, in X and Y directions), so FlatWorld has construed this term to take this into account. The preferred embodiment described in source code in Figs. 12-13 and 15 of the specification indicates separate consideration of thresholds regarding the speeds of horizontal and vertical components of motion. *See also,* Ex. 1 at 11:36-50. The line of source code in Fig. 13 at 1312 "(item 1 of OldPosition - item 1 of CurrPosition) > 2" compares the speed of the horizontal component of motion to a threshold to determine whether to "throwLeft," and the line "(item 2 of OldPosition - item 2 of CurrPosition) > 2" (Fig. 13 at 1317) compares the speed of the vertical component of motion to a threshold to determine whether to "throwDown" (*Id.*). The threshold velocity is "> 2"The preferred embodiment thus incorporates a directional component in the "throw" algorithm in addition to "threshold velocity."

Further, since the claims in which these terms are found use the open transition "comprising," the change in semantics of the gesture may be due to additional factors, not limited solely to the threshold velocity. "The word 'comprising' transitioning from the preamble to the body signals that the entire claim is presumptively open-ended." *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1371-72 (Fed. Cir. 2005) (holding that "[t]he addition of elements not recited in the claim cannot defeat infringement."); *see also Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1347 (Fed. Cir. 2001) ("The transition 'comprising' creates a presumption that the recited elements are only a part of the device, that the claim does not exclude additional, unrecited elements."). This meaning is reflected in FlatWorld's use of the term "necessary condition" in its proposed construction. A necessary condition for a given result (here, causing an image to be removed from the screen by throwing), is a condition without which the result cannot occur, but may or may not be sufficient in itself to cause the result

to occur. In the claims, exceeding the threshold velocity must be at least one condition in the algorithm to remove an image by throwing, but it may or may not be the sole condition.

In the prosecution history, FlatWorld clearly explained to the Examiner the meaning of this term, its importance, and its effect on the invention:

> "Throwing" is thus a modification of the dragging operation that is well known in GUIs[6] that takes the speed *as well as the direction of the dragging into account*. The particular semantic of the operation is that when the speed is above a threshold velocity, the image being dragged is removed from the display.

Ex. 8 at FWAPP998 (emphasis supplied). Dragging images on a screen was known at the time of the invention. However, unlike other graphical user interfaces or "GUIs" used at that time, Dr. Milekic's invention has a threshold velocity, above which the semantic of the operation changes from a drag to a "throw," and removes the image from the display. This understanding of "threshold velocity" was so important, that FlatWorld used it as a means to distinguish the invention over the prior art:

> The "throwing" operation is described at page 10, lines 20-24 of Applicant's Specification. As set forth there, the operation is a modification of the dragging operation that is well known in GUIs that takes the speed *as well as the direction of the dragging into account*. The particular semantic of the operation is that when the speed is above a threshold velocity, the image being dragged is removed from the display.

Id. at FWAPP1023 (emphasis supplied). Thus, the "threshold velocity" is a condition, in the sense of a conditional statement: if below the threshold, then the gesture is a drag; if above the threshold, then the gesture is a throw. But it is a necessary condition, not a sufficient condition.

Apple attempts to make exceeding the "threshold velocity" a "*sufficient" condition*, alone, to remove the image from the screen, thereby excluding from the scope of the claim any embodiments in which exceeding the threshold velocity is merely a *necessary condition* but not a sufficient condition. To illustrate the distinction, to start a fire, one must have fuel, a spark, and oxygen. Each of these three components is a *necessary condition* to start a fire, because a fire cannot start without any one of them. But none of these components alone is a *sufficient condition*

[6] "GUI" stands for "graphical user interface."

to start a fire, because one cannot start a fire with only a spark without fuel and oxygen, or only fuel without a spark and oxygen, or only oxygen without a spark and fuel. Here, the parties agree that exceeding the threshold velocity is a necessary condition to remove an image, but Apple is wrong in arguing that the threshold velocity is ***sufficient*** to remove the image.

Apple's construction would improperly exclude the preferred embodiment. The '318 Patent's specification clearly discloses a preferred embodiment in which the system must first detect that the user's touch has ended, then second process *both* velocity and direction before an image can be removed from the screen, in language any non-programmer can understand. The specification states that in the source code set forth in Figure 13, portion 1301 implements dragging, and portions 1311 and 1317 implement throwing. Ex. 1 at 11:61-63. Portion 1301 of Figure 13 provides as to dragging:

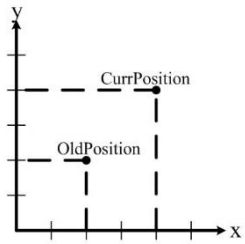
> repeat forever
> put mouseLoc() into OldPosition
> set the loc of the target to MouseLoc()
> wait 2 ticks
> put mouseLoc() into CurrPosition
> *if the mouse is up then exit repeat*

Id., at Fig. 3 (emphasis supplied). Professor Milekic conceived his invention before there was any special programming language for touch screens, so the touch is referred-to as the "mouse" and the location of the touch is referred-to as "mouseLoc[ation]()." Here, the system logs the coordinates of the touch ("mouseLoc") as OldPosition and sets "the loc[ation] of the target [the image] to MouseLoc()," then two system ticks later, it logs the CurrPosition of the touch, and then returns to the first step ("repeat forever"), in which the touch location is stored as OldPosition, and the image moves to the new touch location. Thus, the image is dragged across the screen with the touch as long as this processing loop continues repeating, *i.e.*, as long as the touch has not ended.

The preferred embodiment detects whether the user's finger is still in contact with the screen. The processing loop to register the location of the touch "repeat[s] forever," *until* the system detects that "the mouse is up," *i.e.*, until the touch is lifted off of the screen. Ex. 1 at Fig. 13 at 1301. "[I]f the mouse is up," then the algorithm "exit[s] repeat." *Id.* The system does not attempt to determine whether a throw has occurred until it detects that the touch is lifted off the

screen. *Id.* This fact is further supported by the prose description in the specification. *Id.*, 11:61-12:22. In fact, in the source code of the preferred embodiment, as long as the touch remains on the screen, no matter how fast the image is dragged it will *never* be thrown.

The preferred embodiment also detects direction. Source code tests trigger calls to one of four throw routines, "throwLeft," "throwRight," "throwUp" and "throwDown," which the processor works through sequentially to determine whether to request a throw routine after it detects that the touch has ended. Ex. 1, Fig. 13 at 1311 and 1317. The specification explains that "[t]he position variables OldPosition and CurrPosition each contain two values, item **1**, which is the x coordinate, and item **2**, which is the y component." *Id.*, at 12:9-12. In other words, the drag routine 1301 locates both OldPosition and CurrPosition of the touch in two-dimensional space, as shown below:



The preferred embodiment processes the first algorithm, portion 1311, as a test to determine whether to call a throwLeft routine:

> If (item 1 [x coordinate] of CurrPosition – item 1 [x coordinate] of OldPosition) > 2 then
>
> throwLeft

The difference between the x coordinates registers the horizontal component of the velocity, and the order in which the x coordinates are compared detects the direction. The velocity threshold (for the horizontal component here) is 2. If the condition for a throwLeft is not met, then the system proceeds sequentially through the other three throw call tests. If the x coordinate of OldPosition – the x coordinate of CurrPosition is greater than two, the gesture is moving right. The code before the calls to the throwUp and throwDown routines sequentially compare the y coordinates to determine vertical direction and velocity. If no conditions for a throw routine are met, the system

does not perform a throw at all. In sum, there are only four throw routine tests, each contingent on detecting the "mouse" is up, and each having both a directional and a velocity component.[7] There is no "throw" routine test in isolation from "mouse up" status or direction, consequently, there is no instance in which exceeding the threshold velocity is a ***sufficient*** condition to remove an image.

All of the claim language and prosecution history that Apple relies upon underscores FlatWorld's construction. The claims are all open-ended "comprising" claims, so it is hornbook patent law that the recited elements (*e.g.*, exceeding a threshold velocity) do not exclude embodiments having additional elements. *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008) (construing "a" or "an" open-endedly where patentee used "comprising" transition); *Gillette Co.*, 405 F.3d at 1371-72 (holding that "[t]he addition of elements not recited in the claim cannot defeat infringement."); *see also Crystal Semiconductor Corp.*, 246 F.3d at 1347 ("The transition 'comprising' creates a presumption that the recited elements are only a party of the device, that the claim does not exclude additional, unrecited elements."). Thus, the claims' recital of a threshold velocity for removing an image cannot be read to exclude other factors from the algorithm for image removal. Velocity, in isolation, does not result in a call to any "throw routine" in the preferred embodiment. To the contrary, the preferred embodiment clearly implements an algorithm having *three* factors, (1) detecting the touch has ended ("mouse is up"), and processing (2) velocity and (3) direction, to test whether to call a throw gesture. The "when" language in the claims, and the "if" and "in response to" language in the prosecution history only underscore that exceeding the threshold velocity is a necessary condition for a "throw," but these words do not make the threshold velocity a sufficient condition.

The present case is analogous to a recent Federal Circuit case, *Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 2013 U.S. App. LEXIS 2446 (Fed. Cir. 2013) in which the infringer proposed a construction that would exclude a preferred embodiment. In *Accent*, claims 1-5 of the patent required "operator bodies being operably coupled with a respective one of said gripper, knotter,

[7] That the directional component is distinct from the velocity (speed) component can be seen from the case where the gesture moves diagonally at a speed just exceeding 2 units. No throw will occur because neither the horizontal nor the vertical component of the motion exceeds the threshold of 2.

cutting element, and cover." *Id.* at *9. The infringer proposed a construction requiring *four* elongated operator bodies – "each operably coupled to one and only one of said gripper, knotter, cutting element, or cover." *Id.* at *10. Accent argued that the claims were not limited to a specific number of elongated bodies because a single operator body could perform multiple functions. *Id.* The district court accepted the accused infringer's construction, and the accused device, which had only two elongated bodies, was therefore held not to infringe. *Id.* at *11.

On appeal, the Federal Circuit reversed the district court's claim construction. As the Court noted, in the preferred embodiment disclosed by the specification, there was no one-to-one relationship between the elongated bodies and the recited gripper, knotter, cutter and cover, as required by the district court's construction. *Id.* at *14. Rather, the Federal Circuit emphasized that in the preferred embodiment, two elongated operator bodies were coupled to both the knotter and cover, a configuration excluded by the district court's construction. Accordingly, the Court found that the district court had erred. *Id.* at *15. The Federal Circuit has consistently held that constructions that exclude the preferred embodiment are improper. *On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH*, 386 F.3d 1133, 1138 (Fed. Cir. 2004) (holding that construction excluding preferred embodiment was erroneous); *Globetrotter Software, Inc. v. Elan Computer Group, Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (same); *Int'l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1371-72 (Fed. Cir. 2004) (same). This rule applies even in the face of language in a claim that might otherwise imply such a limitation. Though the *Accent* Court recognized that the term "respective one" might otherwise be limiting, the preferred embodiments made clear that the patentee never intended a one-to-one limitation. *Id.* at *15-16. *See also, Free Motion Fitness, Inc. v. Cybex Int'l*, 423 F.3d 1343, 1350 (Fed. Cir. 2005) (declining to limit term "a linking cable" to requiring a single cable, and adopting open-ended construction); *Baldwin Graphic Sys.*, 512 F.3d at 1342 (construing "a" or "an" open-endedly where patentee used "comprising" transition).

Here, not only would Apple's construction exclude a preferred embodiment, but also there is no language in the claims or other intrinsic evidence that requires the threshold velocity to be a

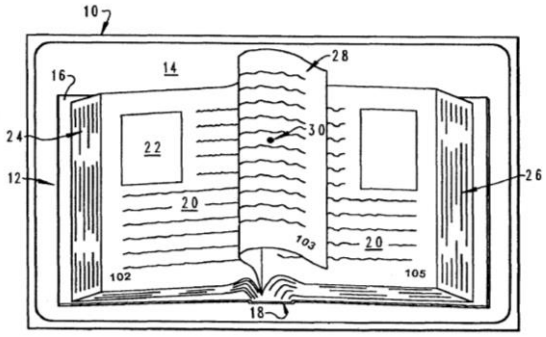
sufficient condition to remove an image from the recited system's screen. The Court should reject Apple's proposed construction of "threshold velocity."

D. "representative thereof" and **"representative of the removed image"**

The term "representative thereof" is found in claims 1 and 7, and the term "representative of the removed image" is found in claim 15.

FLAT WORLD'S CONSTRUCTION	APPLE'S CONSTRUCTION
A depiction of at least a portion of the removed image.	A portrayal or symbol [thereof / of the removed image].

The prosecution history introduces the term "representative" to distinguish the claimed invention from a prior art reader in which a depiction of a portion of the removed image remained on the screen. In the reader reference, a patent by Henckel, the screen displayed the open pages of a book in perspective, as if the user was looking down on it, and the non-displayed images were represented by depictions of the edges of the pages underneath the displayed pages:



Ex. 12, Fig. 2. FlatWorld distinguished Henckel on the ground that the images of the pages were never "removed" because depictions of the edges of each removed page remained on the screen:

> Henckel discloses "a display similar to a printed book or magazine."…When one turns a page in a printed book or magazine, the page does not simply vanish from the book or magazine; as would be expected from a display that emulates the behavior of a printed book or magazine, a turned page also does not vanish from Henckel's display. Instead, a given page is always present in Henckel's display, just as a given page is always present in a printed book or magazine….Since a given page in Henckel's display is always represented in Henckel's display by either a displayed page 20, a turning page 28, or a line 24 or 26, Henckel does not disclose the limitation of Applicant's independent claims that Applicant's thrown image is "removed from the set."

Ex. 8 at FWAPP1157-58; *see also id*. at FWAPP1076, lines 14-15 ("Similarly, when the page is turned in Henckel's display, it is not removed from the display, but is instead indicated in the display by its edge"); *id.* at 1142 and 1172; Ex. 7 at FWAPP804. FlatWorld explained when distinguishing Henckel, "[i]nstead of *removing* a page of the book from the set of images being manipulated, it [Henckel] changes the *form* that the image of the page has in the set." Ex. 8 at FWAPP1106.[8]

Apple's proposed construction urges the Court to expand "representative" beyond the literal depictions of pages in Henckel to also include a "symbol." But there is no discussion in the claim terms, specification, or prosecution history of a "representative" image being a "symbol," and thus "symbolic" representatives are undefined in the written record. Apple makes this gloss up entirely out of extrinsic evidence, a dictionary definition. But Henckel is inconsistent with this interpretation. The Henckel specification clearly states that the "graphical display of a book **12** is intended to look as much like an actual book as possible," and thus the vertical "lines" shown in the figure are *literal* depictions of the edges of the pages, not "symbols":

> Pages which are not displayed are indicated by page edges on the left hand side and the right hand side. These edges provide a visual indication of the location within the book which is displayed. When pages from the beginning of the book are displayed, very few, or no, left page edges are shown, while a larger number of right page edges are shown. Near the end of the book, the number of right page edges will be small, while a larger number of left page edges will be shown.

Id. at 2:26-28 and 2:34-43. Thus, Henckel expressly *refutes* Apple's attempt to introduce the concept of "symbols" into the scope of the representative *images* described in the claims.

E. "image is being dragged" and "image was dragged"

These terms are found in claims 1, 2, 5, 6, and 18, respectively.

[8] The use of the term "representative" in the prosecution history is consistent with the common and ordinary meaning of this term. According to the American Heritage Dictionary, "representative" means "representing, depicting, or portraying or able to do so." Ex. 6. "Thereof" means "of or concerning this, that, or it" (id.) and "of the thing just mentioned." Id., Ex. 11. Therefore, "representative thereof" and "representative of the removed image" refer to a depiction of all or a portion of the removed image. When the "throw" gesture results in removal of an image, neither the removed image itself nor a depiction of any portion of the removed image may remain on the display.

FLAT WORLD'S CONSTRUCTION	APPLE'S CONSTRUCTION
The image is or was caused to move with the touched point, or to track location inputs.	The touched point is or was moved within a selected image, causing the image to move with the touched point.

According to the specification, images may be "dragged" "by moving the finger touching the image across the screen." Ex. 1 at Abstract. The algorithm defining a "drag" operation is defined in source code in Figs. 12-15 (Ex. 1), and it provides that the system registers the location of the touch ("mouseLoc( )") as "oldPosition" and moves the image ("target") to that position, then waits 2 ticks of the clock, then register's the location of the touch as "currPosition," and repeats this process until the touch ends ("if the mouse is up then exit repeat"):

```
repeat forever
put mouseLoc( ) into oldPosition
set the loc of the target to MouseLoc( )
wait 2 ticks
put mouseLoc( ) into currPosition
if the mouse is up then exit repeat
```

Ex. 1 at Fig. 13. Thus, the source code indicates in the line "set the loc of the target to MouseLoc()" (*Id.*, Fig. 13 at 1303) that the system moves the entire image ("target") along with the location inputs from the touch. Moving the touched point "causes the image to move with the touched point, thus permitting the image to be dragged." *Id.* at 2:22-24.

Furthermore, "dragging" is commonly understood in the field of user interfaces, and is defined by the *Authoritative Dictionary of IEEE Standards Terms*: "[t]he process of moving a selected display element on a display surface from one position to another with a locator." Ex. 2 at 337. According to Apple's Dictionary, "drag" means to "move (an icon or other image) across a computer screen using a tool such as a mouse." Ex. 9. The *Dictionary of Computer and Internet Terms* defines "drag" as moving an object across a screen "as if the pointer were dragging the object." *Id.*, Ex. 13 at 151.

Apple's construction ("The touched point is or was moved within a selected image, causing the image to move with the touched point") should be rejected because it impermissibly reads touch limitations from claims 5-7 and 15 into claims 1, 2 and 18. Claims 1, 2 and 18 do not recite a "touched point." This is because claims 1, 2 and 18 do not recite a touch screen, so they read

both on systems with a touch screen as input device *and* on systems having conventional displays with a mouse or other external pointing device (*e.g.*, touch pads). In contrast, claim 5 (which depends from claim 1), recites that claim 1's pointing device is a touch panel, and claim 6 recites the system of claim 5 in which the touch panel is mounted on the screen. Similarly, claim 7 recites a system comprising "a touch sensitive screen," "touching the movable image at a point," and a "point being touched." Likewise, claim 15 recites an apparatus including "a touch screen" and a "continuing touch." Claims 5, 6, 7 and 15 are limited to touch systems, and therefore exclude systems with conventional displays and a mouse or other external pointing device. But claims 1, 2, and 18 are broader than claims 5-7 and 15 because they are not limited to touch input devices.

Under the doctrine of claim differentiation, there is a presumption that claims that use different terms have different meaning and scope. *United States v. Telectronics, Inc.*, 857 F.2d 778, 783-84 (Fed. Cir. 1988) (reversing where district court construed one claim so that it contained the limitations of a different claim). Thus, the dragging of an image term recited in claims 1, 2 and 18 cannot be construed to require a "touched point," as Apple urges.

F. "a system for **manipulating** images," "a system for **manipulating** a movable image,"[9] and "images to be **manipulated** in response to location inputs"

The first two "manipulating" terms are found in the preambles of claims 1 and 7, and the third is found in the body of claim 1 (Ex. 1, 15:5).

FLAT WORLD'S CONSTRUCTION	APPLE'S CONSTRUCTION
Manipulating images includes any one or more of the following: selecting an image, dragging	A set of operations comprising at least selecting, moving, removing, and modifying

[9] The first two terms are the preambles of claims 1 and 7, respectively, neither of which limits the scope of the claims. "[A] preamble is not limiting 'where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.'" *Catalina Mktg. Int'l v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002), citing *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997). When the preamble merely describes the use, function, or benefit of an invention, it is not a limitation. *Id.* at 809. Even descriptive language such as "located at predesignated sites such as consumer stores," as in the *Catalina* case, has been held to be not limiting. *Id.* at 810. Here, the preambles of claims 1 and 7 recite "a system for manipulating images" and "a system for manipulating a movable image," each of which simply states the function and context of the claimed inventions. They do not provide any structure that is not already adequately described in the body of the claims. Therefore, the preambles are not limiting. Thus, Apple's one-size-fits-all construction incorrectly imports a limitation from the body of claim 1 ("images to be manipulated in response to location inputs") into the two non-limiting preambles of claims 1 and 7.

the selected image, dropping the image, moving a selected image, removing an image from the screen, or modifying the image.	

"Manipulation," the noun form of the verb "manipulate," is defined in the patent's abstract to mean any one or more of a non-exclusive set of operations that may be performed on an image:

> *Manipulations include* selecting an image by touching it, "dragging" the selected image by moving the finger touching the image across the screen and "dropping" the image by lifting a finger from it, moving a selected image by touching another location on the screen and thereby causing the selected image to move to the touched location, removing an image from the screen by "throwing" it, i.e., moving it above a threshold speed, and modifying the image by tapping it twice and then moving the finger in a horizontal or vertical direction on the screen.

Dkt. 83 at Abstract (emphasis supplied). The specification defines "manipulations" to "include" the recited operations. The use of the plural in "manipulations" indicates that each of the recited operations is itself an example of a "manipulation." The use of the term "include" indicates that the recited operations are exemplary of the universe of operations that constitute "manipulations." The claims use the verb "manipulating," *i.e.*, "[a] system for manipulating images …." Ex. 1, 15:2. Thus, as FlatWorld's proposed construction reflects, "manipulating" as used in the claims includes any one or more of the recited operations that may be performed on an image.

Apple's proposed construction singles out four of the operations included in the '318 Patent's abstract, and then seeks to limit the scope of the claim by grafting on a requirement that a "manipulation" must include "at least" the four recited operations. In other words, Apple argues that a system does not provide for "manipulating" images unless it enables at least *all* of four operations it singles out in its proposed construction. This construction is contradicted by the specification, which recites a non-exclusive set of operations that *each* constitutes a manipulation of an image. There is no support in the specification or prosecution history for singling out the four operations recited in Apple's proposed construction ("selecting, moving, removing, and modifying"), and requiring that all four to be included in any construction of "manipulating." Nor can Apple find any language in the claims that would support narrowing the definition of "manipulating" down from the scope recited in the specification.

G. "when the point being touched is **being continually moved**"

H. "responding to a **continuing touch** that moves the image"

The term "when the point being touched is being continually moved" is in claims 7, 8, and 19, and the term "responding to a continuing touch that moves the image" is in claims 15 and 20.

FLAT WORLD'S CONSTRUCTIONS	APPLE'S CONSTRUCTION
"when the point being touched is **being continually moved**": Moving the touched point within a selected image causes the image to move with the touched point, thus permitting the image to be dragged. "responding to a **continuing touch** that moves the image:" A touch that permits the image to be dragged.	"when the point being touched is **being continually moved**": When the point being touched is moving without interruption "responding to a **continuing touch** that moves the image:" A touch [that moves the image] that remains in existence without interruption

FlatWorld's proposed construction comes directly from the specification. The specification discloses two ways to move an image on the screen. First, the specification recites that an image may be moved by dragging by "moving the finger across the screen" and dropping it by lifting the finger. Ex. 1, 6:40-43. Second, the specification recites touching the image, and then touching the screen again at the desired location, which causes "the object to move to the location that was [last] touched." *Id.* at 6:50-55. The term "continuing" is used in the claims to distinguish between these two types of touches: one continuous "dragging" touch *versus* two successive touches. FlatWorld's proposed construction reflects this rationale. A "continuing touch"/touch "being continually moved" is the type of touch that permits the image to be dragged.

Apple's proposed construction ("moving without interruption"/"remains in existence without interruption") makes no sense. All touches on the invention's touch screen must eventually be interrupted, in the sense that none are perpetual. The preferred embodiment is an example. In the preferred embodiment's source code quoted at page 20, above, the system repeatedly loops through the logging of the location of the touch ("MouseLoc( )") and moving the image to that location, *until the touch is interrupted* ("if the mouse is up then exit repeat") (Ex. 1,

Fig. 13 at 1301), at which point it runs through a series of algorithms to identify whether a drag or a throw or some other gesture is intended (*Id.* at 1311, 1317 and 1319). Apple's proposed construction would impermissibly exclude the preferred embodiment from the claim because the touch that is followed by gesture recognition algorithms does not move or remain in existence "without interruption." Indeed, interruption of the touch is one of the necessary steps registered in the gesture recognition algorithm described in the specification.

I. "**when** the image is being dragged in response to the location inputs and the system detects that the velocity with which the image is being dragged exceeds a threshold velocity, the system responds by removing the image from the display"

"**when** the point being touched is being continually moved and the system detects that the velocity at which the point is moving exceeds a predetermined threshold velocity, the imaging being continually moved is removed from the screen"

"**when** the computer detects that the velocity of the touch exceeds a predetermined threshold, the computer responds by removing the image from the screen"

The first "when" phrase appears in claims 1, 2, 5, 6, and 18, the second in claims 7, 8, and 19, and the third in claims 15 and 20.

FLAT WORLD'S CONSTRUCTIONS	APPLE'S CONSTRUCTION
When: in view of the fact that.	When the image is dragged faster than the threshold velocity, the semantics of the drag operation change: instead of simply moving faster, the image vanishes.

"When," in the context of the phrases quoted above, is used in its conditional sense. In other words, "in view of the fact that" the recited factors are present, the system or computer responds by removing the image from the screen or display. As noted at pages 11-18, above, the recited factors are not exclusive, because the claims are all open-ended "comprising" claims, so the recited "threshold velocity" is a necessary condition for the removal of an image from the screen, but it is not also required to be a sufficient condition. The fact that FlatWorld's construction reflects the understanding of a person having ordinary skill in the art at the time of the invention is evidenced by Apple's own Dictionary application, which defines "when" to mean "in view of the fact that; considering that." (Ex. 9); *see also Webster's New Riverside University Dictionary*, at 1313 (1984)("considering that: IF")(Ex. 14)).

Apple's construction is another attempt to limit the claim to systems in which threshold velocity is a sufficient condition to cause removal of an image from the screen. Its proposed construction is a quote from FlatWorld's March 22, 2004 amendment in the prosecution history, which explained how the "when" phrases quoted above distinguish Henckel. FWAPP01136-44 at 1141. But in context, the quoted language does not say that Henckel is distinguished because its image-removal algorithm includes more factors than threshold velocity, while the invention's algorithm includes only threshold velocity to recognize a throw. In fact, Henckel did not even include the concept of a threshold velocity. Rather, the point FlatWorld made to the examiner was that "*[n]one* of the operations in Henckel changes its semantics when the speed with which it is performed passes a threshold velocity." *Id.* at FWAPP01141:12-13. FlatWorld pointed out that no matter how fast one performed the swipe operation in Henckel, the meaning or "semantics" of the gesture remains the same: a page is turned. *Id.* at 16-23. Fast, short swipes cause the pages to be turned more quickly, but does not convert the page-turning gesture into some other type of gesture. *Id*. at 25-27. In the invention, however, below the threshold velocity the semantic of the gesture is a drag, while above the threshold velocity, the semantic of the gesture is a throw. It is this point that FlatWorld argued to distinguish Henckel, not the sufficiency of threshold velocity to remove the image.

V. CONCLUSION

For the reasons stated above, FlatWorld respectfully requests that the Court adopt its proposed constructions and decline to adopt Apple's proposed constructions.

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Respectfully Submitted,

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PROOF OF SERVICE

The undersigned hereby certifies that a true and correct copy of the above and foregoing document, the DECLARATION OF RYAN MEYER and its attached exhibits have been served on July 8, 2013, to all counsel of record who are deemed to have consented to electronic service via the Court's CM/ECF system per Civil Local Rule 5.4.

/s/ *Steve W. Berman*
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